Isocyanurate Industry Ad Hoc Committee

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August 11, 2003

Administrator U.S. Environmental Protection Agency 1200 Pennsylvania Avenue, NW Washington, DC 20460

> Isocyanurate Industry Ad Hoc Committee HPV Submission for Trichloro-s-triazinetrione (CAS No. 87-90-1)

Dear EPA Administrator:

On behalf of the Isocyanurate Industry Ad Hoc Committee (IIAHC; Consortium No. I am pleased to submit our response to the US EPA HPV Chemical Challenge Program for trichloro-s-triazinetrione (CAS No. 87-90-1). Members of IIAHC supporting this submission include:

- Aqua Clor, S.A. de C.V., Monterrey, N.L., C.P. 64070 MEXICO
- Aragonasas DELSA, SA (DELSA), 28004 Madrid, SPAIN
- Atofina Chemicals, Inc., Philadelphia, PA 19103¹
- BioLab, Inc., Lawrenceville, GA 30049
- Clearon Corporation, Fort Lee, NJ 07024
- Fertilizers & Chemicals, Ltd., Haifa 31013, ISRAEL
- ICI Americas, Inc., Bridgewater, NJ 08807
- Nissan Chemical America Corporation, Houston, TX 77042
- Nisso America, Inc., New York, NY 10017
- Occidental Chemical Corporation, Dallas, TX 75380
- Shikoku Chemicals Corporation, Orange, CA 92668

This submission satisfies the Committee's original commitment letter of March 15, 1999, to support this chemical in the voluntary HPV Chemical Challenge Program. Follow-up letters of August 31, 2001, and November 20, 2002, notified the Agency of extensions in our HPV submission in order to maintain the proprietary information from becoming available before IIAHC member companies filed the necessary notification in response to the EU Biocides Products Directive.

¹ Atofina Chemicals, Inc. has recently withdrawn from supporting this chemical in the HPV Challenge Program, and notified the Agency in a letter dated May 12, 2003.

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The chlorinated isocyanurates hydrolyze with use in water to form isocyanuric acid (cyanuric acid) and free available chlorine, as hypochlorous acid (HOCl). Their activities are measured in terms of the available chlorine produced with hydrolysis of each substance. This hydrolysis reaction undergoes equilibrium forming chlorinated and non-chlorinated isocyanurate substances for each of the chlorinated isocyanurates resulting in the opportunity for read-across of data since the toxicity will be virtually equivalent at the same available chlorine concentration. Trichloro-s-triazinetrione (CAS No. 87-90-1) contains three chlorine ions per molecule, and data for this substance are considered "worst-case" for read-across with the less reactive dichlorinated isocyanurates.

Acute mammalian toxicity of the chlorinated isocyanurates is recognized as related to the corrosive nature of the substances at high concentrations on exposed tissues. Acute aquatic toxicity is due to their hydrolysis in water to available chlorine which is toxic to many aquatic organisms. Because chlorinated isocyanurates hydrolyze in water with chlorine dissociation from the parent substance, and since the effects and fate of chlorine are well established, isocyanuric acid has been identified as the relevant substance of exposure to assess long-term effects on health and the environment for the chlorinated isocyanurates.

It is significant to note that much of the information summarized in the attached robust summaries was reviewed by EPA and is discussed in the EPA Reregistration Eligibility Document (RED) for the Chlorinated Isocyanurates (EPA RED, 1992). As stated in the RED, EPA determined that there was adequate information to support the safe use of these compounds. To arrive at that determination, EPA relied on studies on the specific chlorinated isocyanurates being reviewed as well as studies on isocyanuric acid itself. In accordance with the RED:

EPA determined that isocyanuric acid can represent all the chlorinated isocyanurates for the purpose of conducting metabolism, subchronic, chronic, developmental and mutagenicity studies. By using the nonchlorinated s-triazinetrione as the test substance, the effects of the triazinetrione moiety could be distinguished from those of the chlorine. Sodium isocyanurate was considered to be toxicologically equivalent to isocyanuric acid and, as such, was selected as a suitable test substance for the development of toxicity data.

Based on its review of the available information, EPA concluded that:

All toxicity data requirements have been met. The effects and toxicity of the chlorinated isocyanurates are well understood and no further information is needed to evaluate human health risks.

EPA arrived at a similar determination with the regards to environmental effects:

The Agency has reviewed data submitted in support of registration, and the general literature, for environmental effects for chlorinated isocyanurates and their dechlorinated end-products, isocyanuric acid and cyanuric acid and has determined that the data base is adequate and will support reregistration.

IIAHC's evaluation of the available environmental and human health data is consistent with the conclusions arrived at by EPA.

Enclosed is the test plan, which includes 1) Summary Table of Data Elements, and 2) Robust Summaries for Trichloro-s-triazinetrione. The IIAHC believes that the perspectives shared in this transmittal letter for the adequacy of the database substantiating the completeness of testing for trichloro-s-triazinetrione should also be included with the test plan. The IIAHC is also submitting separately a test plan for chemically related sodium dichloro-s-triazinetrione (CAS No. 2893-78-9) and sodium dichloro-s-triazinetrione, dihydrate (CAS No. 51580-86-0), which may be useful for cross-reference. Consistent with EPA's determination in the RED that these data support the safe use of this product for its intended applications, the IIAHC believes that no additional testing is needed to satisfy the US EPA HPV Chemical Challenge Program for this substance.

If there are questions about either of these submissions, please call me at 678-502-4127 or Geri Werdig at 202-546-3260.

Sincerely,

Gary A. Wright, Ph.D. Chairman, IIAHC HPV Review Committee

Enclosures:

- 1) Summary Table of Data Elements
- 2) Robust Summaries for Trichloro-s-triazinetrione
- 3) Entire submission on 3 ½ disk

cc: Mr. Richard Hefter, Jr., Chief, HPV Branch

Mr. Walton F. Suchanek, Chairman, IIAHC

Ms. Geraldine W. Werdig, Manager, IIAHC